E4 ligase-specific ubiquitination hubs coordinate DNA double-strand-break repair and apoptosis

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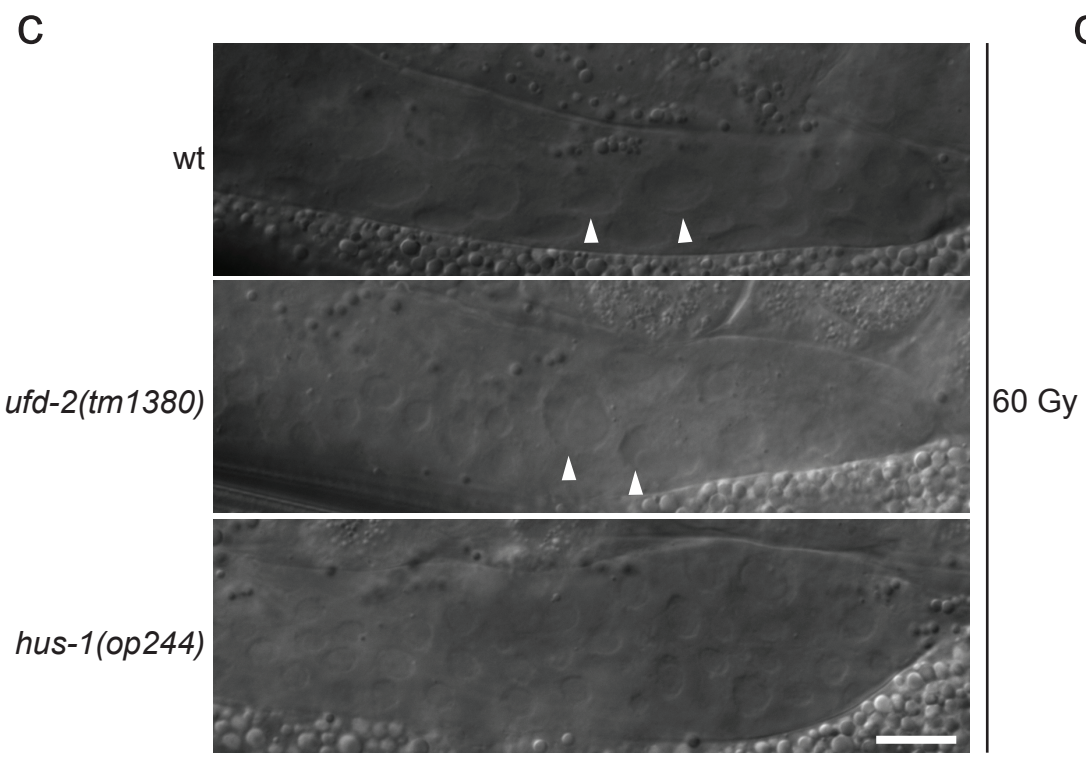
Supplementary Figure 1

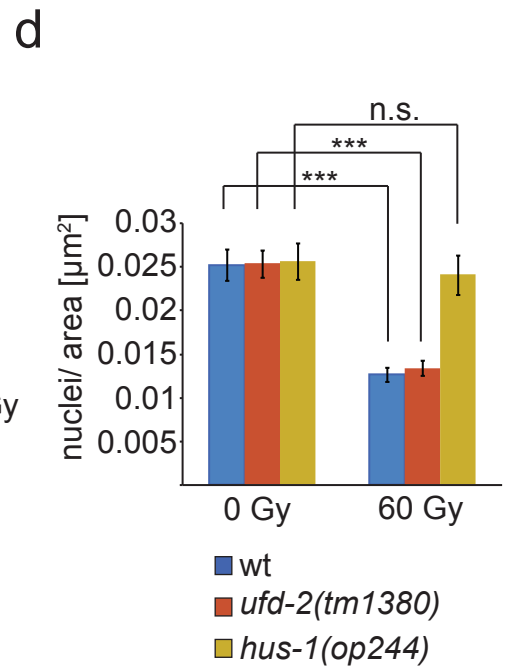
a

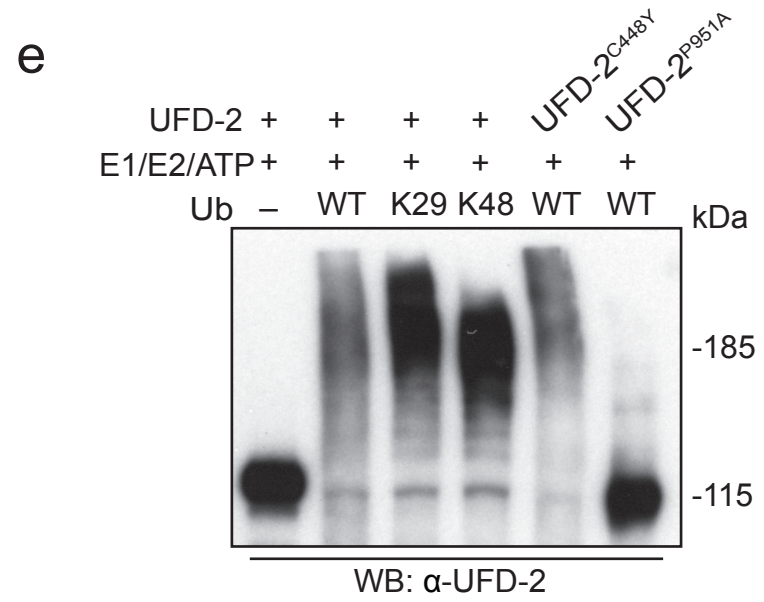
	ced-1(e1735)	*ced-1(e1735); ufd-2(tm1380)*
Corpses	10.05	11.21
s.e.m.	0.43	0.50
P-value	-	n.s.

b

	wt	*ufd-2(tm1380)*	*gla-3(op216)*	*gla-3(op216); ufd-2(tm1380)*
Corpses/ germline	0.91	0.73	10.56	10.07
s.e.m.	0.17	0.12	0.56	0. 62
P-value	-	n.s.	***	***

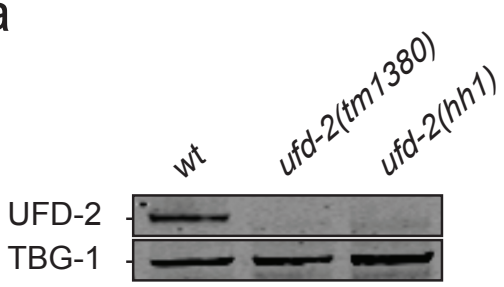






Supplementary Figure 2

a



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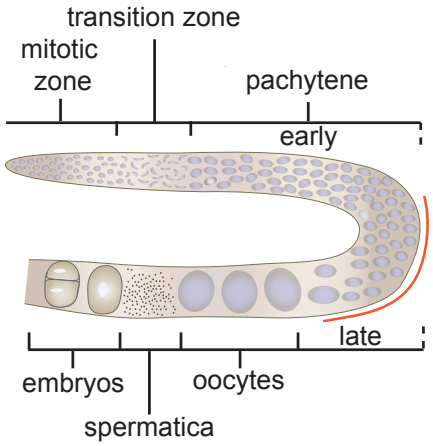

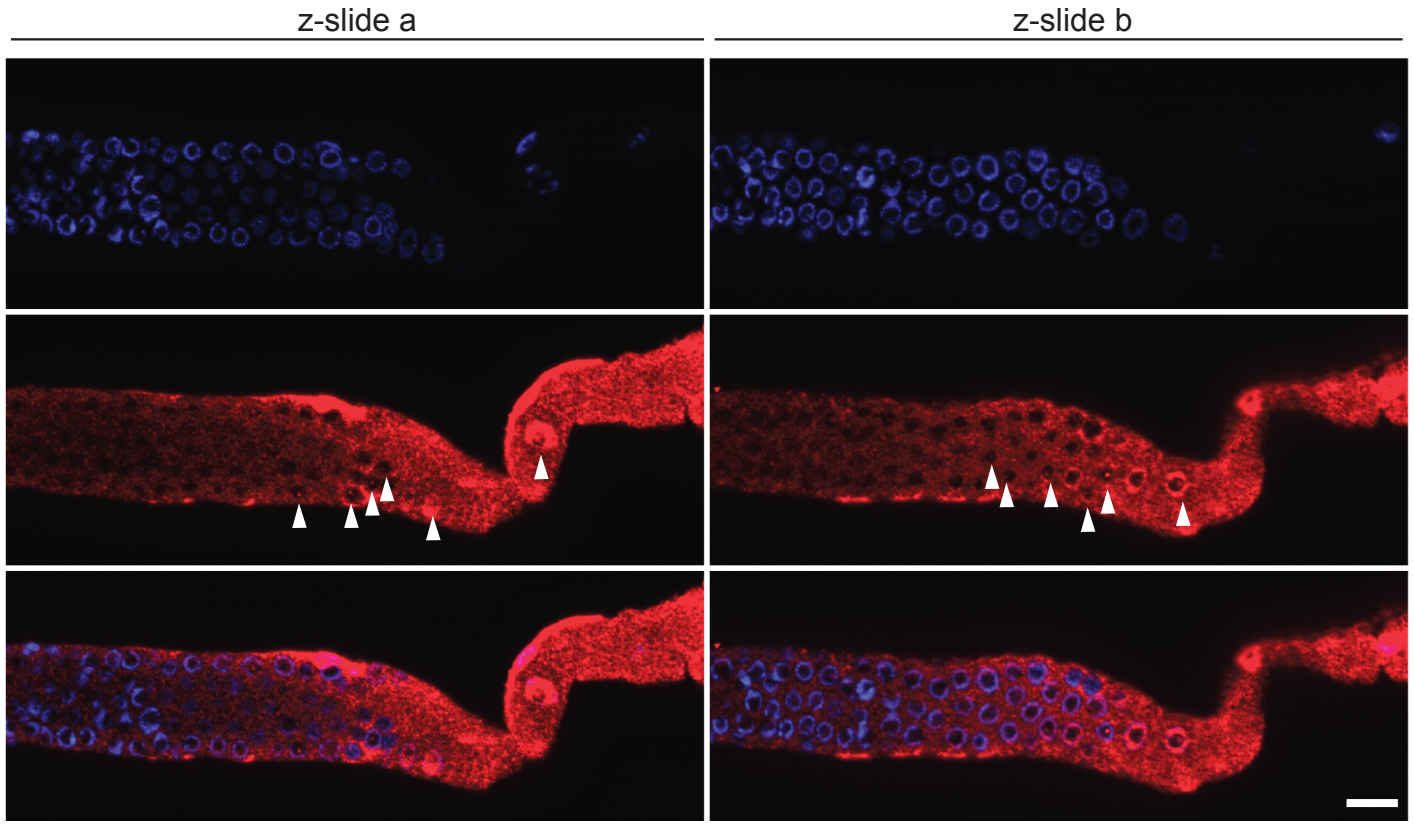

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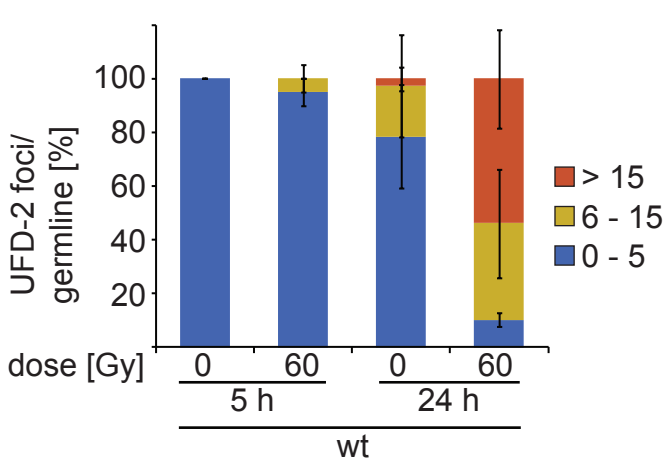
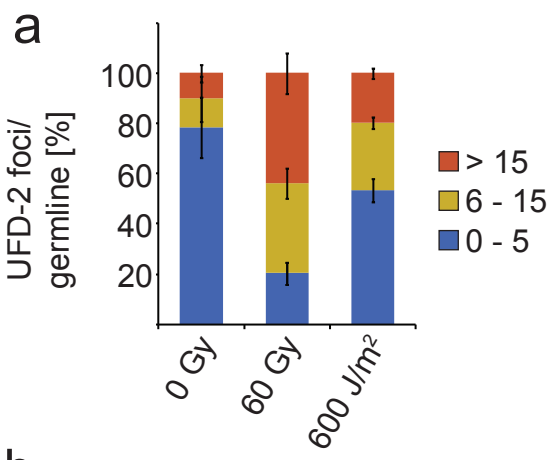
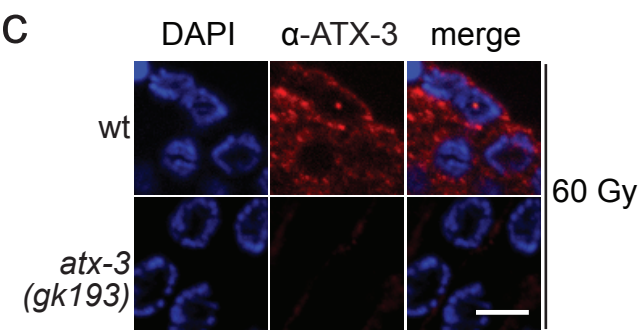
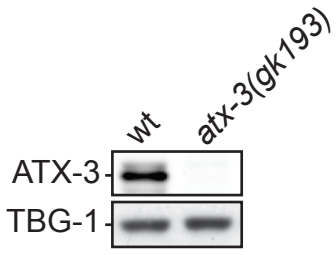


Supplementary Figure 3

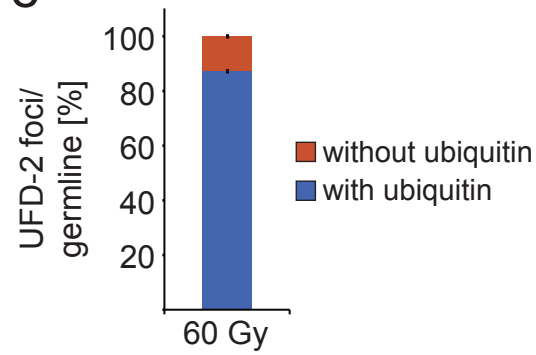


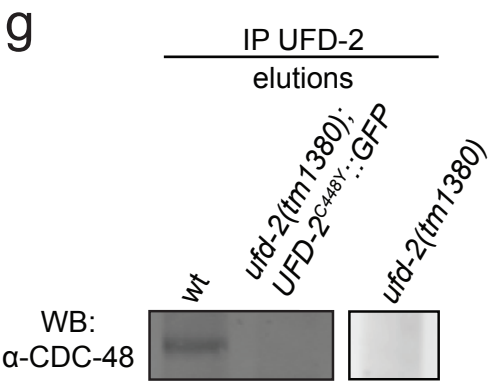


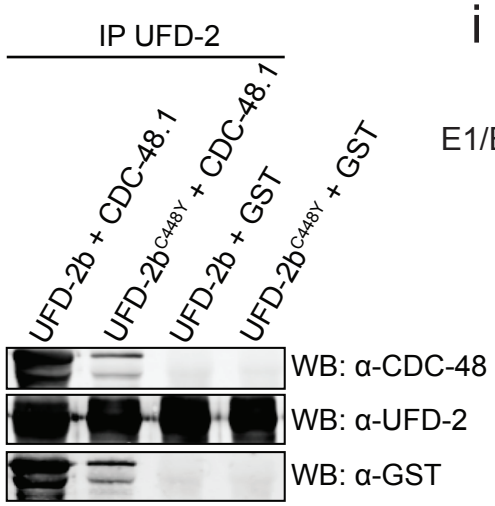


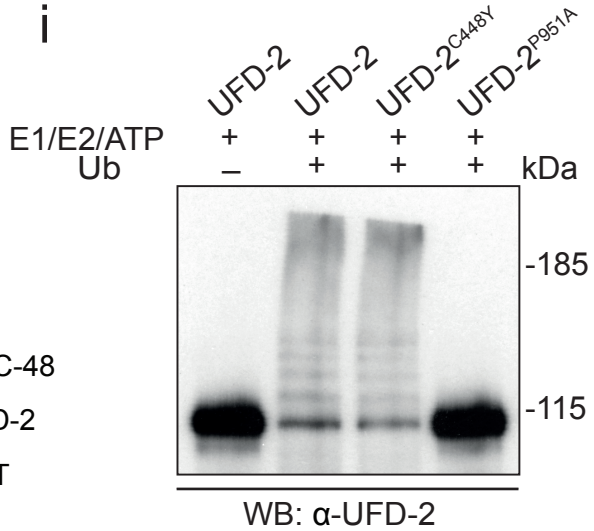
b

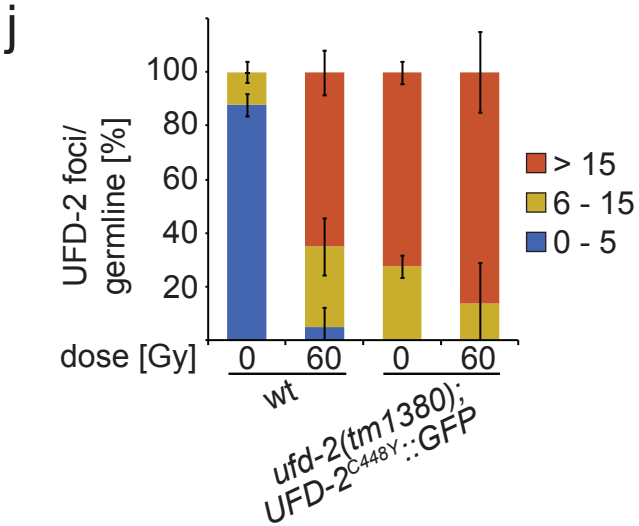
dose [Gy]	wt average	wt s.e.m.	wt p-value	*ufd-2(tm1380)* average	*ufd-2(tm1380)* s.e.m.	*ufd-2(tm1380)* p-value	*ufd-2(hh1)* average	*ufd-2(hh1)* s.e.m.	*ufd-2(hh1)* p-value	*rad-51(ok2218)het.* average	*rad-51(ok2218)het.* s.e.m.	*rad-51(ok2218)het.* p-value
0	100.00	1.84	-	100.00	1.99	-	100.00	3.29	-	100.00	4.33	-
30	77.61	2.46	-	65.55	3.10	**	60.1	2.77	***	64.87	4.26	***
60	54.40	3.03	-	40.18	2.73	**	47.5	3.32	*	33.10	2.66	***

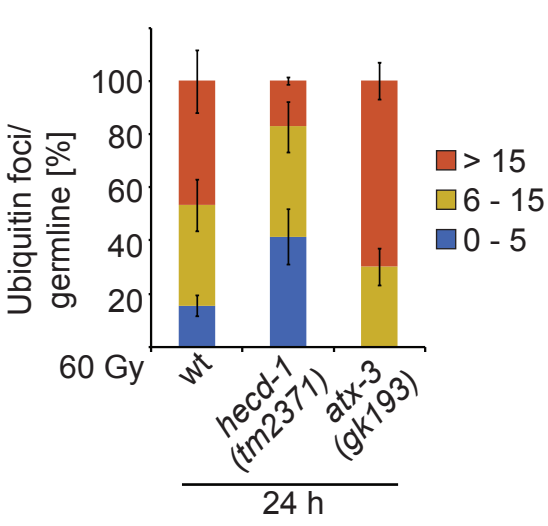




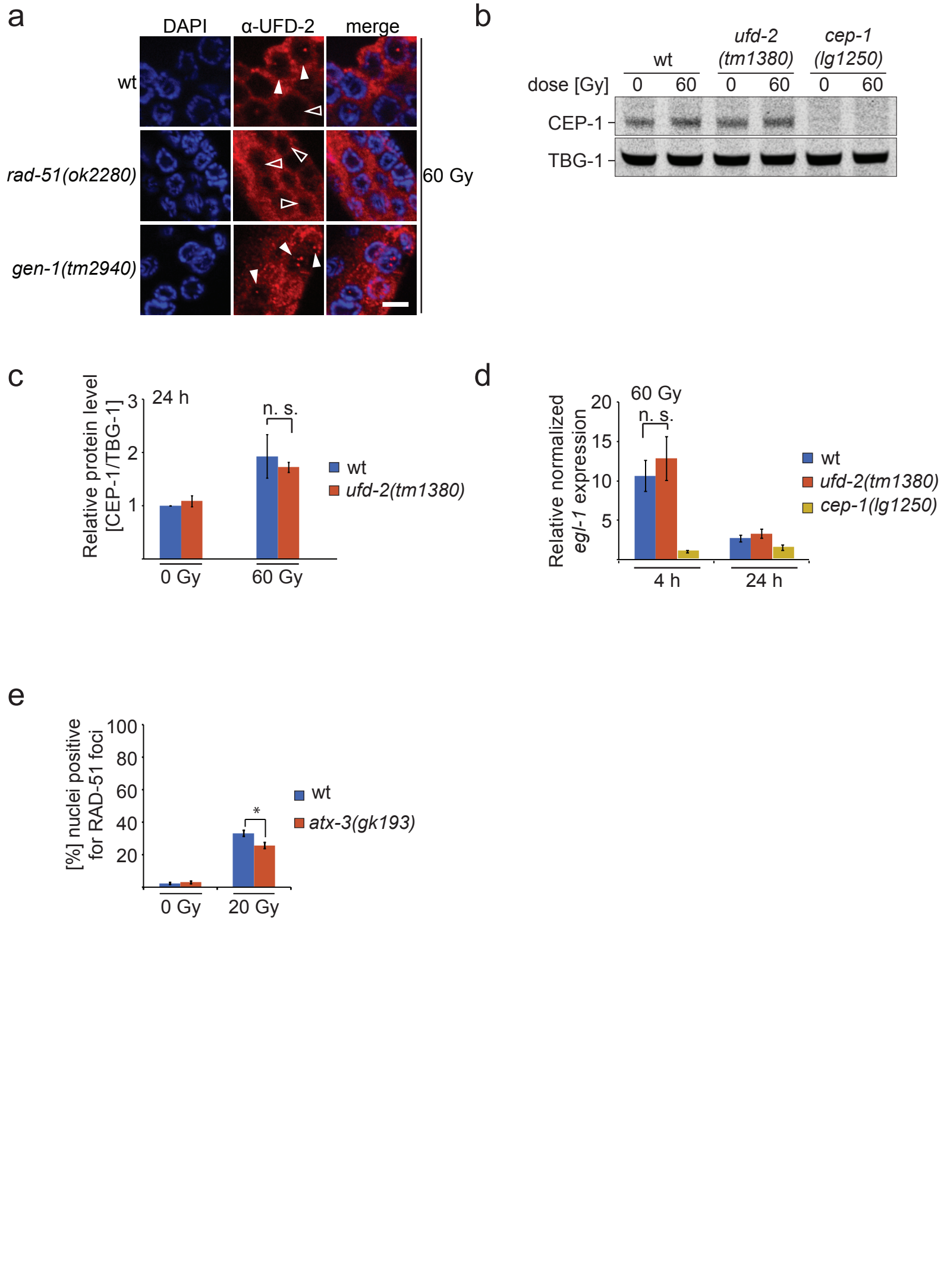






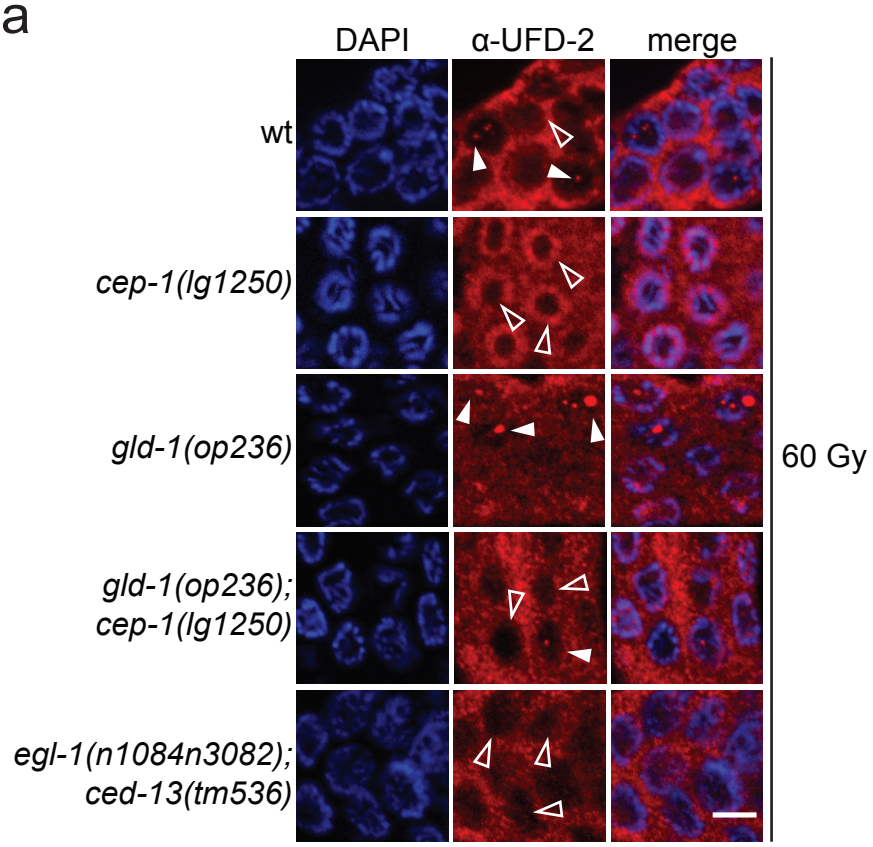


Supplementary Figure 4



Supplementary Figure 5

a



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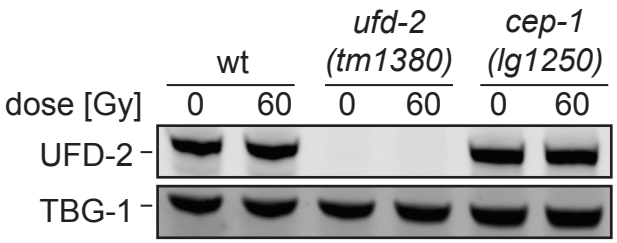

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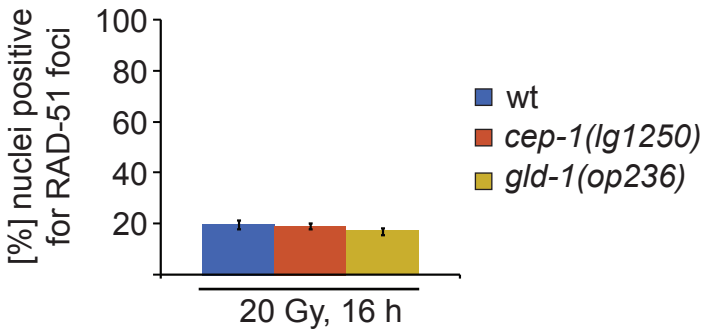
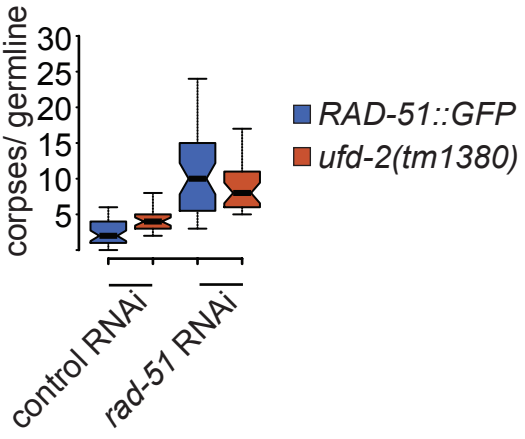


Supplementary Figure 6

a



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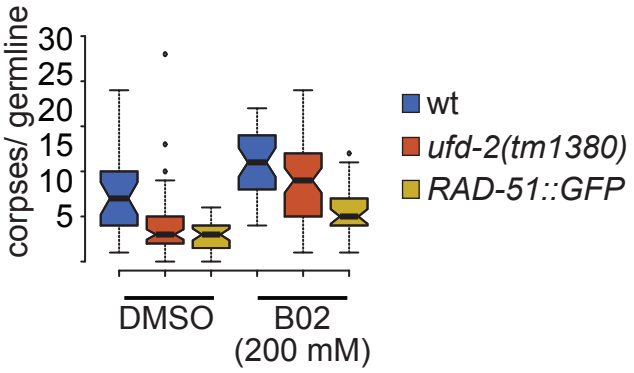
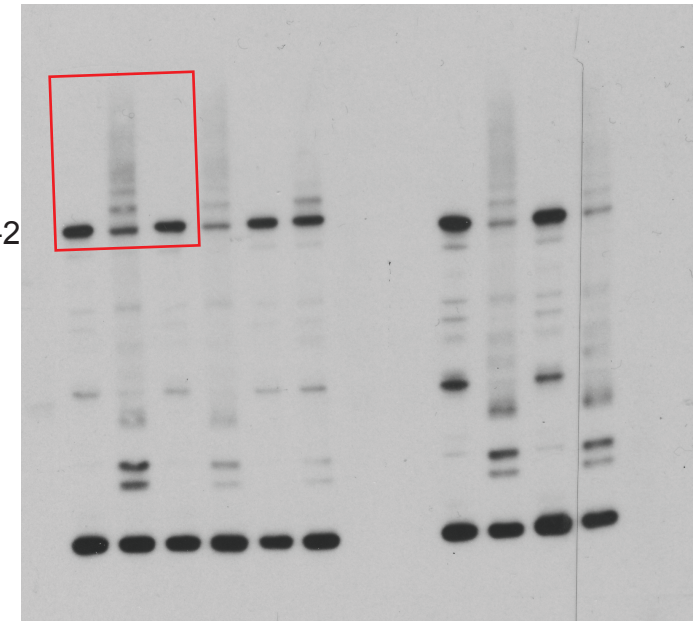


c

dose	wt			*RAD-51::GFP*			*rad-51(ok2218) het.*		
[Gy]	average	s.e.m.	p-value	average	s.e.m.	p-value	average	s.e.m.	p-value
0	100,00	0,18	-	100,00	0,68	-	100,00	2,15	-
60	70,71	2,68	-	65,86	3,57	n.s.	44,52	1,83	***

Supplementary Figure 7

a



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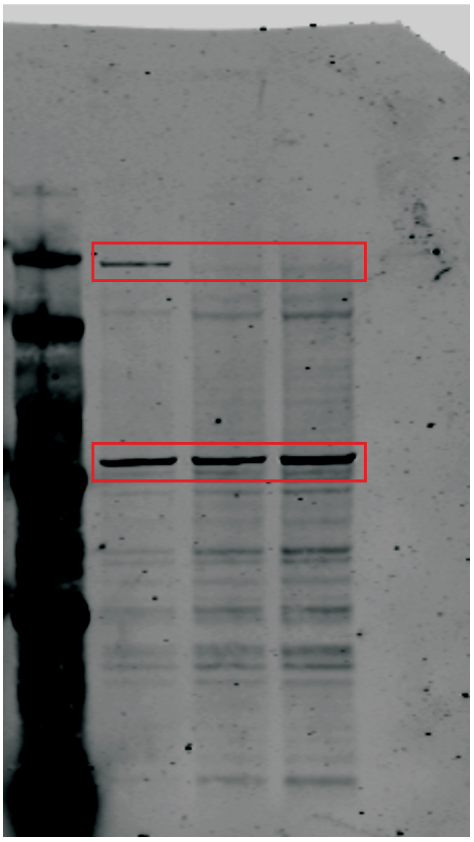

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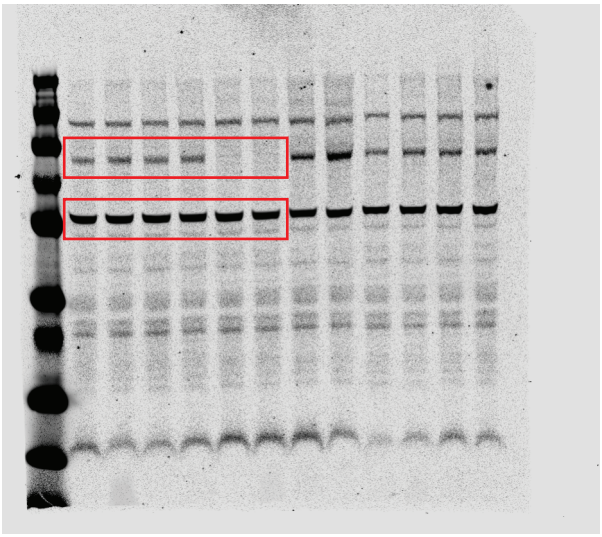
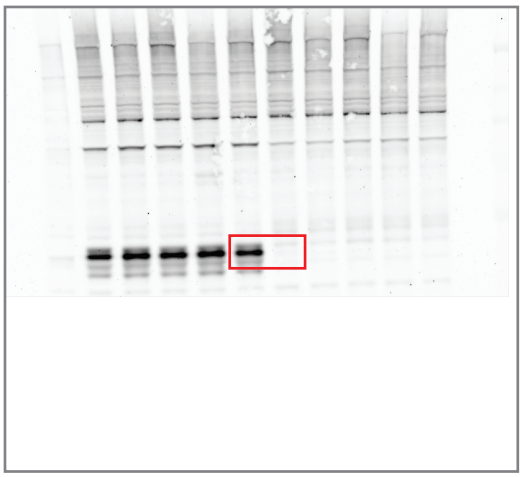
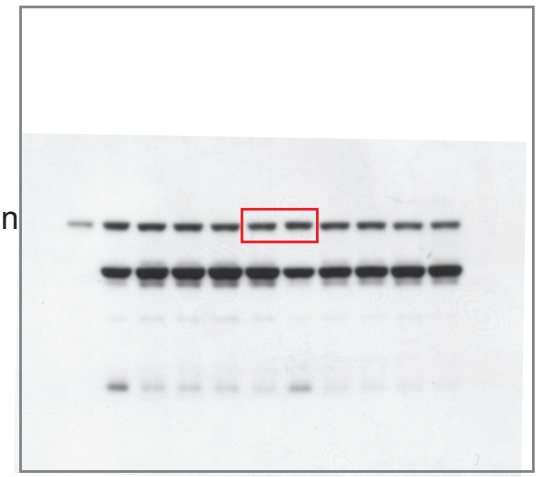
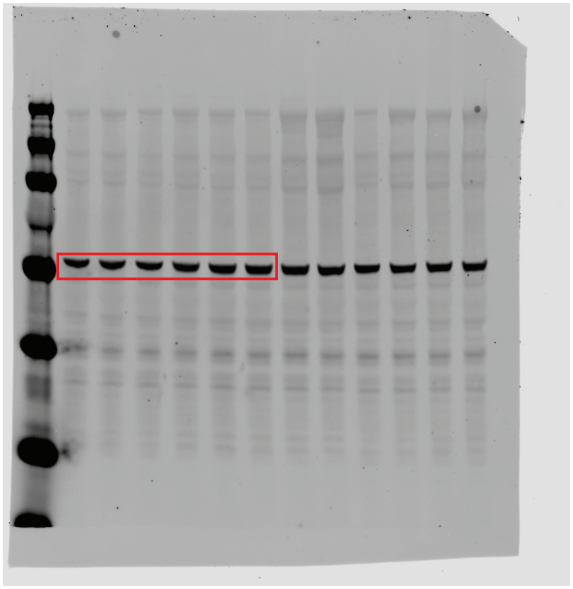


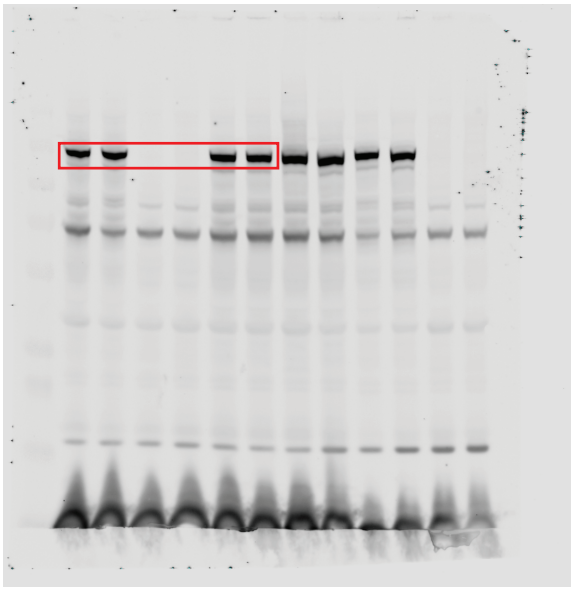
d





Supplementary Figure 7, continued





Supplementary Table 1

		n=
Figure 1b	wt (*gfp* RNAi) 0 Gy 12 hrs	3
	wt (*gfp* RNAi) 0 Gy 24 hrs	10
	wt (*gfp* RNAi) 0 Gy 36 hrs	10
	wt (*gfp* RNAi) 30 Gy 12 hrs	6
	wt (*gfp* RNAi) 30 Gy 24 hrs	5
	wt (*gfp* RNAi) 30 Gy 36 hrs	9
	wt (*gfp* RNAi) 60 Gy 12 hrs	5
	wt (*gfp* RNAi) 60 Gy 24 hrs	6
	wt (*gfp* RNAi) 60 Gy 36 hrs	11
	wt (*gfp* RNAi) 120 Gy 12 hrs	2
	wt (*gfp* RNAi) 120 Gy 24 hrs	10
	wt (*gfp* RNAi) 120 Gy 36 hrs	11
	wt (*ufd-2* RNAi) 0 Gy 12 hrs	3
	wt (*ufd-2* RNAi) 0 Gy 24 hrs	6
	wt (*ufd-2* RNAi) 0 Gy 36 hrs	6
	wt (*ufd-2* RNAi) 30 Gy 12 hrs	4
	wt (*ufd-2* RNAi) 30 Gy 24 hrs	9
	wt (*ufd-2* RNAi) 30 Gy 36 hrs	8
	wt (*ufd-2* RNAi) 60 Gy 12 hrs	4
	wt (*ufd-2* RNAi) 60 Gy 24 hrs	7
	wt (*ufd-2* RNAi) 60 Gy 36 hrs	6
	wt (*ufd-2* RNAi) 120 Gy 12 hrs	2
	wt (*ufd-2* RNAi) 120 Gy 24 hrs	6
	wt (*ufd-2* RNAi) 120 Gy 36 hrs	9
Figure 1d	wt 0 Gy	80
	wt 30 Gy	69
	wt 60 Gy	73
	ufd-2(tm1380) 0 Gy	76
	ufd-2(tm1380) 30 Gy	80
	ufd-2(tm1380) 60 Gy	74
	ufd-2(hh1) 0 Gy	73
	ufd-2(hh1) 30 Gy	75
	ufd-2(hh1) 60 Gy	80
Figure 1f	wt 0 Gy	53
	wt 60 Gy	43
	ufd-2(tm1380) 0 Gy	59
	ufd-2(tm1380) 60 Gy	37
	wt; *UFD-2::GFP* 0 Gy	63
	wt; *UFD-2::GFP* 60 Gy	38
	ufd-2(tm1380); UFD-2::GFP 0 Gy	58
	ufd-2(tm1380); UFD-2::GFP 60 Gy	36
	wt; *UFD-2::GFP^{P951A}* 0 Gy	56
	wt; *UFD-2::GFP^{P951A}* 60 Gy	57
	ufd-2(tm1380); UFD-2::GFP^{P951A} 0 Gy	52
	ufd-2(tm1380); UFD-2::GFP^{P951A} 60 Gy	52

		n=
Figure 2b	wt 0 Gy	231
	wt 60 Gy	280
Figure 2d	*ufd-2(tm1380); UFD-2::GFP* 0 Gy	34
	ufd-2(tm1380); UFD-2::GFP 60 Gy	51
	ufd-2(tm1380); UFD-2::GFP^{P951A} 0 Gy	36
	ufd-2(tm1380); UFD-2::GFP^{P951A} 60 Gy	42
Figure 3d	wt 0 Gy	87
	wt 60 Gy	107
	hecd-1(tm2371) 0 Gy	57
	hecd-1(tm2371) 60 Gy	52
	atx-3(gk193) 0 Gy	36
	atx-3(gk193) 60 Gy	53
Figure 3e	wt 0 Gy	48
	wt 60 Gy	45
	ufd-2(tm1380) 0 Gy	47
	ufd-2(tm1380) 60 Gy	52
	hecd-1(tm2371) 0 Gy	46
	hecd-1(tm2371) 60 Gy	39
	ufd-2(tm1380); hecd-1(tm2371) 0 Gy	42
	ufd-2(tm1380); hecd-1(tm2371) 60 Gy	41
Figure 3f	wt 0 Gy	51
	wt 60 Gy	38
	ufd-2(tm1380) 0 Gy	44
	ufd-2(tm1380) 60 Gy	42
	atx-3(gk193) 0 Gy	42
	atx-3(gk193) 60 Gy	44
	ufd-2(tm1380); atx-3(gk193) 0 Gy	41
	ufd-2(tm1380); atx-3(gk193) 60 Gy	39
Figure 4d	wt 0 Gy	39
	wt 20 Gy 1 h	40
	wt 20 Gy 7 hrs	37
	wt 20 Gy 16 hrs	35
	wt 20 Gy 48 hrs	37
	ufd-2(tm1380) 0 Gy	41
	ufd-2(tm1380) 20 Gy 1 h	43
	ufd-2(tm1380) 20 Gy 7 hrs	36
	ufd-2(tm1380) 20 Gy 16 hrs	36
	ufd-2(tm1380) 20 Gy 48 hrs	39
Figure 5b	wt 0 Gy	122
	wt 60 Gy	106
	rad-51(ok2218) 0 Gy	93
	rad-51(ok2218) 60 Gy	76
	gen-1(tm2940) 0 Gy	74
	gen-1(tm2940) 60 Gy	92

Supplementary Table 1, continued

		n=
Figure 5c	wt 0 Gy	130
	wt 60 Gy	150
	cep-1(lg1250) 0 Gy	57
	cep-1(lg1250) 60 Gy	63
	gld-1(op236) 0 Gy	146
	gld-1(op236) 60 Gy	162
	gld-1(op236); cep-1(lg1250) 0 Gy	45
	gld-1(op236); cep-1(lg1250) 60 Gy	50
	egl-1(n1084n3082); ced-13(tm536) 0 Gy	55
	egl-1(n1084n3082); ced-13(tm536) 60 Gy	63
Figure 5d	wt 0 Gy	35
	wt 20 Gy	63
	ufd-2(tm1380) 0 Gy	39
	ufd-2(tm1380) 20 Gy	40
	ufd-2(tm1380); UFD-2::GFP 0 Gy	38
	ufd-2(tm1380); UFD-2::GFP 20 Gy	38
	RAD-51::GFP 0 Gy	36
	RAD-51::GFP 20 Gy	34
Figure 5e	wt 0 Gy	71
	wt 60 Gy	74
	ufd-2(tm1380) 0 Gy	73
	ufd-2(tm1380) 60 Gy	65
	ufd-2(tm1380); UFD-2::GFP 0 Gy	74
	ufd-2(tm1380); UFD-2::GFP 60 Gy	82
	RAD-51::GFP 0 Gy	61
	RAD-51::GFP 60 Gy	67

Supplementary Table 2

		n=
Supplementary Figure 1a	*ced-1(e1735)*	38
	ced-1(e1735); ufd-2(tm1380)	33
Supplementary Figure 1b	wt	45
	ufd-2(tm1380)	45
	gla-3(op216)	44
	gla-3(op216); ufd-2(tm1380)	45
Supplementary Figure 1d	wt 0 Gy	30
	wt 60 Gy	32
	ufd-2(tm1380) 0 Gy	33
	ufd-2(tm1380) 60 Gy	33
	hus-1(op244) 0 Gy	25
	hus-1(op244) 60 Gy	23
Supplementary Figure 2c	wt 5 hrs 0 Gy	31
	wt 5 hrs 60 Gy	32
	wt 24 hrs 0 Gy	20
	wt 24 hrs 60 Gy	17
Supplementary Figure 3a	wt 0 Gy	79
	wt 60 Gy	69
	wt 600 J/m^2	96
Supplementary Figure 3b	wt 0 Gy	147
	wt 30 Gy	147
	wt 60 Gy	144
	ufd-2(tm1380) 0 Gy	144
	ufd-2(tm1380) 30 Gy	144
	ufd-2(tm1380) 60 Gy	144
	ufd-2(hh1) 0 Gy	75
	ufd-2(hh1) 30 Gy	75
	ufd-2(hh1) 60 Gy	75
	rad-51(ok2218)het. 0 Gy	111
	rad-51(ok2218)het. 30 Gy	117
	rad-51(ok2218)het. 60 Gy	117
Supplementary Figure 4e	wt 0 Gy	35
	wt 20 Gy	42
	atx-3(gk193) 0 Gy	43
	atx-3(gk193) 20 Gy	48